

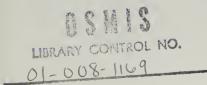
# aeromet

SEASONAL PROGRESS REPORT NO. 6 for the period
June, July and August, 1977

to

ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
-1860 Lincoln St., Suite 900
Denver, CO 80203

Contract No. 68-01-1946



## aeromet inc.

P.O. BOX 45447 TULSA, OKLAHOMA 74145

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#88-480

TN 8=7 1=2 10447 100.0

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by

Aeromet, Inc. P.O. Box 45447 Tulsa, OK 74145



#### 1.0 INTRODUCTION

Low level temperature and wind data were collected for the summer season of June, July and August, 1977 at the U-a/U-b Tract 5 miles south of Bonanza, Utah. Data collection terminated on 30 June at Casper, Wyoming; the Colorado C-b Tract 25 miles west of Rio Blanco, Colorado; Craig, Colorado; Escalante and Hanksville, Utah; and Rock Springs, Wyoming. Data collection will continue at the U-a/U-b Tract through 31 January 1978.

The data were collected using a 30 gm helium filled pilot balloon with a temperature sonde attached, a single theodolite and a TSR-2 receiver/recorder twice a day every other day. The observations were scheduled ½ hour after sunrise and at 1400L.

The pilot balloon had an ascent rate of 500 ft/min and was tracked by a single theodolite for 12 minutes with the azimuth and elevation angles recorded every 30 seconds on a cassette tape recorder. The tape was transcribed to a pilot balloon form after the observation.

The temperature sonde operated at 403 MHz and the signal was received by a ground plane antenna at least 16 ft AGL which was attached to the Aeromet, Inc. TSR-2 receiver/recorder. The TSR-2 receiver has a built-in Rustrak strip chart recorder and the temperature was recorded within the range from -50°C to +50°C. A baseline temperature calibration was performed with each T-Sonde by the adjustment of the recorded temperature to match the thermometer measured temperature next to the transmitting sonde. Once the calibration check was finished the balloon was released with the sonde attached and the temperature was recorded for at least 20 minutes. At the completion of each observation the data were mailed to Aeromet, Inc.



#### 2.1 Mixing Layer Height

The average mixing layer height was computed for the morning and afternoon based on the morning and 1400L temperature soundings. The balloon release ½ hour after sunrise is near enough to the minimum temperature to assume the correctness of the calculated mixing layer heights. The afternoon balloon release is generally not at the time of maximum heating and the user of the mixing layer height data must be aware that minor changes in the calculated values can be expected. Without equipping the field sites with minimum/maximum thermometers the extrapolation of the afternoon data cannot be justified in establishing a data base for statistical analysis. The approximation of the afternoon maximum temperature would be a "calculated guess" for there are: 1) local effects which are to be determined and would be filtered out with extrapolation, 2) mountain effects which alter the lower 1500m (e.g. downslope effects), and 3) meteorological effects which can alter the expected change in the sounding (e.g. advection, moisture, etc.).

It is felt that to better define the mixing layer height a variety of "heat island" effects should be viewed. The rigorous method would be to define 15 "heat island" effects ranging from 0 to 14°C and let the user decide which would best serve his needs. However, for this analysis 0°, +5° and +10° "heat island" effects were considered.

A summary of the average mixing layer heights calculated with the 0', +5' and +10' "heat island" effects at the U-a/U-b Tract for the summer season of June, July, and August 1977 are included in the report. The percent of occurrence of the average height within 250m increments above ground level is given in tabular form. The total number of soundings included in the sample populations are listed in the table.

#### 2.2 Stability and Inversion Classification

The temperature and wind data were edited to remove data felt to cause anomalous results in the stability and inversion classification schemes. Only the stations listed prior to the table classifying the inversions were used in the calculations.

The temperature data are processed to produce a seasonal summary of inversion layers and lapse rates within the inversions and from the inversion base to the surface by means of the Holzworth classification scheme for inversions (Holzworth, G. C., 1974: "Climatological Data on Atmospheric Stability in the United States" paper presented at the American Meteorological Society Symposium on Atmospheric Diffusion and Air Pollution, September 9-13, 1974, Santa Barbara, California.)



The temperature and wind data are processed together to produce an average bivariate frequency distribution of wind direction versus wind speed represented in the 500m layer adjacent to the ground for the summer season. The distribution is presented by the six Pasquill stability classes (A-F) and a summary independent of stability. If the  $\Delta T/100m$  criterion is met but the wind speed criterion is not met, then the wind data are checked against the criterion for the next stability class,

STABILITY CLASS	ΔT (°C/100m)	WIND SPEED (m s <sup>-1</sup> )
A B C D E	<-1.9 -1.91.7 -1.71.5 -1.50.5 -0.5 - 1.5 >1.5	<pre></pre>

always cascading to the D stability class. Once the wind speed criterion is met the data are classified under the new stability class even though now the lapse rate exceeds the class criterion. For example, if the  $\Delta T/100m$  value is 1.7 and the wind speed is 7 m s  $^{-1}$ , the lapse rate criterion is met for the stability class F, however the wind speed criterion is exceeded. The wind speed is greater than the 5 m s  $^{-1}$  maximum limit for class E but falls within the criterion of class D, which includes all wind speeds. As a result the observational data with a  $\Delta T$  value of 1.7°C/100m and a wind speed value of 7 m s  $^{-1}$  are classified under stability class D, not class F.

The data are also punched on computer cards in a format compatible with the STAR PROGRAM of the National Climatic Center, NOAA, U.S. Department of Commerce. A description of the punched output can be found in the Monthly Progress Reports.



## AVERAGE MIXING LAYER HEIGHT

## Utah U-a/U-b Tract

SEASONAL: June, July, August 1977

MIXING LAYER HEIGHT (Height in meters)	PERCENT OF OCCURRENCE AFTERNOON					
	0.	+5.	+10.	0.	+5*	+10.
surface	93.0			5.4		
1 - 250m	7.0	59.5		13.6		
251 - 500m		21.4	17.1	5.4		
501 - 750m		7.1	24.4	10.8	5.4	
751 - 1000m		4.8	24.4	10.8	8.1	
1001 - 1250m		2.4	9.8	21.6	2.7	
1251 - 1500m		4.8	7.3	2.7	10.8	5.4
1501 - 1750m				2.7	10.8	5.4
1751 - 2000m			2.4	5.4	5.4	
>2000m			14.6	18.9	40.5	56.8
None defined				2.7	16.2	32.4
TOTAL NUMBER	43	42	41	37	37	37



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DATE 06/02/77 TIME 04:48MST ASCENT RATE 500 FPM PATA INTERVAL 15 SEC.
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                        THY DIVOZ DIVOZ BELDA INV-
CDEG C)/100M CDEG C)/100M
              AFTERS ACL
   METERS AGE
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       0.
                               1.01
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                    LAYER INP
                     METERS AGL
         METERS AGL
                                 1DEG C1/100M
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=1 06
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=1 12
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             100.
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             250.
             750.
                        1001
                        1500.
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   METERS AGI
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                                          DATA INTERVAL 15 SEC.
            TIME IX: SOMET
                        ASCENT RATE 500 FP9
DATE 06/04/77
       IMPRE ARE NO INVERSION BASES SITHIN 1500M OF THE SEC.
                                    DT/DZ
         LAYER RASE
                    LAYER TOP
         METERS AGI
                     METERS AGL
                                 (DFG C)/100M
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-0 80
-1 05
-0 93
                         100
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             2546
             SAU .
                         750.
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                        ASCENT RATE SOO FPM DATA INTERVAL 15 SEC.
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          TIME DULLARMOT
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(DEG C)/100M (DEG C)/100M
   IMY HASE
             -- IMV TOP
   METERS AGL
              METERS AGL
                  3057
                               1.37
 DATE 05/08/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.
                                    OT/DZ BELOW INV
   INV BASE
                IMV TUP
                            IGY DIIDZ
   METERS AGI
              METERS AGE
                          CDEG CI/100M
                                            0.0
                   76
                               0.47
       0.
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DATE 06/10/77 TIME 04:47MST ASCENI PATE 500 FPM DATA INTERVAL 15 SI  INV BASE INV IND INV DI/DZ DI/DZ BFLOW INV METERS AGL (DET C)/100M (DEG C)/100M  0. 229. 0.56 0.0  **********************************	EC.
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0. 229. 0.56 0.0 ***********************************	
**************************************	
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76. 134. 0.0 -2.35	
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750 -1 09 -1	
1000 1500 -1.01	
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UTAH HAUR FLEV 1585 METERS SOUNDING ID 4797	T 0 7
DATE 06/14/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15.8	EC.
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DATE 06/16/77 TIME 04:46MST ASCENT RATE 500 FPM DATA INTERVAL IS S	
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626.	665.	0.92	-1.18
***********	******	**************************************	SOUNDING ID 4795
DATE 06/18/77	TIME 04:50MST	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
INV BASE METERS AGI	THY TOP	THV DINDZ (DEG CI/100M	COEG COVIDOM
0.	101	1,3B	0.0
************		**************************************	SOUNDING ID 4877
DATE 06/18/77	TIME 14:50 Mat	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
INV BASE METERS AGI	THY TOP	INV OT/DZ	OT/OZ BELOW INV (DEG C)/100M
223.	261	0.0	×1.53
**************************************			SUUNDING ID 4878
DATE 06/20/77	TIME ON: SOMET	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
			OTINZ RELOW INV
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DATE 06/24/77	TIME OUTUBMET	ASCENT RATE 500	PPM DATA INTERVAL_15_SEC.
INV RASE METERS AGI	INV TOP	INV DI/DZ	DT/DZ BELOW INV
0.	495	0,92	0.0
	A 1 154	******************************	SOUNDING ID 4884



LITAH LI		**************************************	SOUNDING ID 4884
DATE 06/24/77	TIME 14:02MST	ASCENT RATE 500 FPM	DATA INTERVAL 15 SEC.
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			**********
DATE 06/26/77		* ASCENT RATE 500 FPM	DATA INTERVAL 15 SEC.
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	500	500 87 - 750 84	
pagement and the set	750	1000 -0.75	· · · · · · · · · · · · · · · · · · ·
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DATE 06/28/77	ALIR	FLEV 1585 METERS	SOUNDING ID. 4871
DATE 06/28/77	TIME GU:SAMST	ASCENT RATE 500 FPM	DATA INTERVAL 15 SEC.
	ALIR	ASCENT RATE 500 FPM	DATA INTERVAL 15 SEC.  DZ BELOW INV DEG CIZIOOM
INV RASE METERS AGI	TIME 64:54MRT	ASCENT RATE 500 FPM	DATA INTERVAL 15 SEC.
INV RASE METERS AGI	INV TOP  METERS AGL  191	ASCENI RATE 500 FPM  INV DI/DZ DI/  (DEG C)/100M (	DATA INTERVAL 15 SEC.  DZ BELOW INV DEG CIZIOOM
INV RASE METERS AGI	INV TOP METERS AGE  1917  *****************	FIFV 1585 METERS  ASCENT RATE 500 FPM  INV DI/DZ DI/ (DEG C)/100M  1.52  ***********************************	SOUNDING ID. 4871  DATA INTERVAL 15 SEC.  OZ RELOW INV DEG CI/100M  O.O.
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1 NV RASE METERS AGI  0.  *************  IITAH U  DATE 06/28/77  INV RASE METERS AGI  792.  *************  IITAH II  DATE 06/30/77	INV TOP  METERS AGL  1917  *************  AUR  TIME 13:00MSI  INV TOP  METERS AGL  8307  **************  AUR  TIME 04:50MSI	INV DIVDZ DIV  (DEG C)/100M  1.52  *********************  ASCENT RATE 500 FPM  INV DIVDZ DIV  (DEG C)/100M  0.45  ***********************************	SOUNDING ID 4871  DATA INTERVAL 15 SEC.  DZ BELOW INV  C.O.  TANKANANANANANANANANANANANANANANANANANAN
INV RASE METERS AGI  O.  *************  UTAH U  DATE 06/28/77  INV BASE METERS AGI  792.  *************  ITAH II  DATE 06/30/77	INV TOP METERS AGL  1917  *************  AUR  TIME 13:00MST  INV TOP METERS AGL  8307  ***************  *************  TIME 04:50MST	ASCENT RATE 500 FPM  INV DI/DZ DI/ (DEG C)/100M  1.52  ********************  ASCENT RATE 500 FPM  INV DI/DZ DI/ (DEG C)/100M  0.45  ***********************************	SOUNDING ID 4871  DATA INTERVAL 15 SEC.  OZ BELOW INV  DEG CIZIOOM  OLO  TAXAXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
INV RASE METERS AGI  O.  *************  INV RASE METERS AGI  O.  ************  INV BASE METERS AGI  792.  ************  INV BASE METERS AGI  797.  INV BASE METERS AGI  O.	INV TOP METERS AGL  1917  *************  AUR  TIME 13:00MST  INV TOP METERS AGL  8307  ***************  *************  TIME 04:50MST  ****************  ****************  ****	ASCENT RATE 500 FPM  INV DI/DZ DI/ (DEG C)/100M  1.52  ********************  ASCENT RATE 500 FPM  INV DI/DZ DI/ (DEG C)/100M  0.45  ***********************************	SOUNDING ID 4871  DATA INTERVAL 15 SEC.  OZ BELOW INV  DATA INTERVAL 15 SEC.  OZ BELOW INV  DEG CD/100M  #1.08  ***********************************
INV RASE METERS AGI  0.  **************  INV BASE METERS AGI  792.  ************  INV BASE METERS AGI  792.  *************  ITAH II  DATE 06/30/77  INV BASE METERS AGI  0.  ******************  ITAH II  ATE 06/30/77	INV TOP  METERS AGL  1917  ****************  TIME 13:00MSI  TIME 13:00MSI  B307  ****************  TIME 04:50MSI  *******************  AHR  TIME 04:50MSI  ***********************************	######################################	SOUNDING ID 4871  DATA INTERVAL 15 SEC.  DZ BELOW INV  DATA INTERVAL 15 SEC.  DATA INTERVAL 15 SEC.  DZ BELOW INV  DEG CD/100M  #1.08  ***********************************
INV RASE METERS AGI  0.  **************  INV BASE METERS AGI  792.  ************  INV BASE METERS AGI  792.  *************  ITAH II  DATE 06/30/77  INV BASE METERS AGI  0.  ******************  ITAH II  ATE 06/30/77	INV TOP  METERS AGL  1917  ****************  TIME 13:00MSI  TIME 13:00MSI  B307  ****************  TIME 04:50MSI  *******************  AHR  TIME 04:50MSI  ***********************************	ASCENT RATE 500 FPM  INV DI/DZ DI/ (DEG C)/100M  1.52  ***********************************	SOUNDING ID 4871  DATA INTERVAL 15 SEC.  DZ BELOW INV  DATA INTERVAL 15 SEC.  DATA INTERVAL 15 SEC.  DZ BELOW INV  DEG CD/100M  #1.08  ***********************************



***********	(*************************************	FIFV 1585 METERS	**************************************	44******
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0.	1147	1.27	0.0	_
· **********	****	* * * * * * * * * * * * * * * * * * * *	**************** \$\text{SOUNDING ID}	, *****
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			C1/100M	
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	750	1500	74	
	**************************************	**************************************	**************************************	
DATE 07/04/77	TIME DUISPHOT	ASCENT RATE 50.0	O FPM DATA INTERVA	. 15 SEC.
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HTAH H	BULA	ELEV 1585 METERS	SOUNDING ID  DATA INTERVA	4861
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	*********	*************** ELFV 1585 METERS	SOUNDING ID	********** 4868
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	ERS_AGLUE1	TERS AGL COEG	C)/100M	rel fedhemiophe galikacezi. 3
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				1
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DATE 07/10/77 THERE		ASCENT RATE 500		15 SEC.
- IITAH II	Alik	FLFV 1585 MFTPRS	SHUNDING TO	
DATE 57/10/77	TIME_13:58MST		S FPM DATA INTERVA	then s (the numblithing pressure little
INV RASE	THV THE	TAV DT/DZ	DIANZ BELOW TAY	- L



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**1	**********	**************************************	**************************************	**************************************	k * * *
DATE	17/12/77	11MF 04:57Ms1	ASCENT RATE 500	FPM DATA INTERVAL 15 SE	c.
	INV RASE METERS AGI	METERS AGE	INV DI/DZ	DI/DZ BELOW INV	
	0.	457	1.4%	0 , 0	
**	**********	****************************	* * * * * * * * * * * * * * * * * * *	SOUNDING TO 4872	***
DATE	07/12/77	TIME 13:50MgT	ASCENT RATE Soo	FPM DATA INTERVAL 15 SE	. D.
	INV BASE METERS AGI		INV_DI/DZ CDEG_C1/100M	OT/DZ BELOW INV	
le sau	38.	76.	0.0	<b>~5.</b> 66	
**:	**********	**************************************	* * * * * * * * * * * * * * * * * * *	**************************************	****
DATE	07/14/77	TIME OSIDOMST	ASCENT RATE 500	FPM DATA INTERVAL 15 SE	·c
	INV BASE METERS AGI	METERS AGL	INV DIADZ	DI/DZ BELOW INV	
maniq,	0.	267	1,77	O O O O O O O O O O O O O O O O O O O	
* * * :	********* (JT AH.	************* UAIIR	**************************************	SOUNDING ID 4869	****
DATE	07/14/77	TIME 13:52MST	ASCENT RATE 500	FPM DATA INTERVAL 15 SE	F.C.
	INV BASE METERS AGI	INV TOP MEIERS ACI	CDEG CI/100M	DI/DZ BELOW INV	
	274.	476.	0.0	. = 0 . 96 we is the top and the offerend distribute.	relibiektyra cere
**;	********* HATI		**************************************	**************************************	****
DATE				FPM DATA INTERVAL 15 SE	· C.
#· m·	HETERS AGI	THV TOP		OFG CIVION	
_	0.	343	1.77	0.0	
	IITAH	HATIR	FIEV 1585 METERS	**************************************	
DATE				FPM DATA INTERVAL 15 SE	
	METERS AGI		IDEG C1/100M	DI/DZ BELNW INV (DEG C)/100M	
	244.	282	0.0	-1.45a @al work	



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TATE	07/18/77	11MF 05:01MST	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
	INV HASE	INV IOD	LDEG CIVIDZ	DIVOZ BELOW INV
~	0.	1527	1,52	0.0
***	********	*****	**********************************	**************************************
DATE				FPM DATA INTERVAL 15 SEC.
48717*	INV BASE	JAV IOR METERS ACI		DI/DZ BELOW INV
	0.	76.	0.0	0.0
***	*****	****	*****	*****
)ATE	07/20/77		ASCENT RATE SOO	SOUNDING ID 5118  FPM DATA INTERVAL 15 SEC.
	THV BASE	INV IDP	INV_DI/DZ	nt/r7 Brinw thv
	METERS AGL	METERS AGL	(DEG C)/100M	**CDEG C) / 100 M
			· · · · · · · · · · · · · · · · · · ·	PU . 70
***	HTAH II		FIFV 1585 METERS	SOUNDING ID 5123
DATE	07/22/77	TIME 05:00MSI	ASCENT RATE SOO	EPM DATA INTERVAL 15 SEC.
	INV HASE METERS AGI	METERS_AGE	TNY DI/DZ	CDEG C)/100M
	305.	343	ú <b>.</b> n	-0.65
***	***********	************ Alla	FI FV 1585 METERS	SOUNDING ID 5121
DATE	07/22/77	TIME 13150461	ASCENT PATE 500	FPM DATA INTERVAL 15 SEC.
	INV BASE	INV TUP	INV_DI/DZ	OT/DZ BELOW INV
	115.	153	0.0	~1.34
黄黄素	********	**************************************	**************************************	**************************************
DATE				FPM DATA INTERVAL 15 SEC.
	INV BASE	INV TOP	ZOVIO VIII	DT/DZ BELOW THV
, MA	0.	152:	0.0	O O
***	*****	*****	* * * * * * * * * * * * * * * * * * * *	*******
4-	HATH II	AHR -	FLEV 1585 METERS	SOUNDING ID 5112 FPM DATA INTERVAL 15 SEC.
-	INV BASE		ZOVIQ VNI	termina era sent era
767	METERS AGE	METERS ACI.	_CDEG_C1/100M	OFG C)/100M
			0.0	
***	**************************************	*************	*************** FIFV 1585 METERS	**************************************



************	**************************************	*********	**************************************	SOUNDING ID	5114
DATE 07/26/77	TIME US: OKMST	ASCENI_R	LIF SOO FPM	DATA INTERVAL	15_SEC.
INV BASE	INV TOP	INV L	DT/DZ DT/	OZ BELOW INV	t in 18
.0.	381		95	0.0	tushi a
*******	****	* * * * * * * * * * *		****	*****
LITAH L	IAUR	FIFV 1585 1	ETFRS _	SOUNDING ID.	5116
				DATA INTERVAL	_
LAY	FR BASE IA	YER TOP	DI/DZ		
MF1	ERS AGL . MF		(DEG C)/10		इन्होब्राजेल-स्टोर्न संस्था १
	100 250 500	250	=1-05	+ tester - g +	
and a second	750	1000-	=0.98 =0.98 =1.06	P J - MILL TRUE AMINERS	technicity additional ( - table) is
gamen and advance of the	, b		• - 40 40	a main a maintenan a maile de due	anner municipante etti seripentelija inteli
	<u>************</u>	FLEV_1585_N	ETERS	SOUNDING ID	5109
DATE 07/28/77	TIME US: NOMET	ASCENT RA	ITF 500 FPM	DATA INTERVAL	15 SEC.
INV BASE	INV TOP.	TWV (	DTZDZ DTZ	OZ BELOW INV	massallihadrahan til å ulen .
0.		(			
parameter de la resona de la reconstancia della reconstancia de la rec				· · · · · · · · · · · · · · · · · · ·	na verte per mer especialistic de la companya de la
UTAH U	ALIB	ELEV. 1585 A	METERS	SOUNDING ID	5111
DATE 07/28/77	TIME 13:50MRT	ASCENT RA	ATE 500 FPM	DATA INTERVAL	. 15 SEL.
INV BASE METERS AGI	INV TOP	INV (	1/107 OT/	DEG CIZION	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
608.	646.		1,92	-1.08	
********	****	****	****	****	and the same of the
DATE 07/30/77		ASCENT RA		SOUNDING ID	
	ARE NO INVERS	· · · · · · · · · · · · · · · · ·	The second second second second second		
	FR BASE LA	YER TOP	OT/DZ (DEG_C)/1	) <u>0 M</u>	tions are p
	0	100]	-2.82 -0.69	n	ibi uli i
	100 250 	250 500 750	#1_02	\$ 1.0 to Concertifical in	advaller mints on 190 x 19
	750 1000	1900	-1-05	17	P
	****	****	*****	*****	******
DATE ORZOLZZZ				SOUNDING ID	
					i.
METERS AGI	METERS AGL	CDEG C	1/100M DI/	DEG C)/100M	
0,	571.	(	95	0.0	ty nate t
***********************************	*******	**************************************	************************	**************************************	5106



117 H 111		FIFV 158	METERS	SOUNDING II	5106
DATE 08/01/77	114F 13:50MST	ASCENI	RATE 500	FPH DATA INTERV	AL 15 SEC.
THERE	ARE NO THVERS	HOM BASES	WITHIN 1	SOON OF THE SEC	
		YER TOP TERS AGL	OFG C	/DZ 1/1004	
	100	100	1	294	·
	250 500	500-	- () - 1	83 97 00	P
	750.	1500	<b>-</b> 0	92	
					-
IIT AH III		FI FV -1 58		SUUNDING IT	5104
DATE 08/03/77	TIME OS: 12MST	ASCENT	RATE 500	FPM DATA INTERV	AL 15 SEC.
JAV BASE	INV TOP	(DEG	01/DZ 01/100M	DT/DZ BELOW INV	2 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
0.	610		0.89	0.0	
*****	****	****	******	*****	******
	4118			SOUNDING	
DATE 08/03/77	TIME 13:50MS	ASCENT	RATE 500	FPM DATA INTERV	AL 15 SEC.
INV RASE	INV TOP	(DEG	V DT/DZ C1/100M	DT/DZ BELOW INV	. 10
989	1217			m 1 . 04	
********				*****	
UTAH UZ	AURRUA	FIFYLISAS	METERS	SOUNDING II	5107
DATE 08/05/77	TIME OS: 19het	ASCENT	RATE 500	FPM DATA INTERV	IAL 15 SEC.
INV BASE METERS AGI	METERS AGI	CDEG	07/DZ	OTINZ BELOW INY	
724.	B76		0.52	-0.35	
*******	******	*****	*****	***	*****
UTAH UA	AUB	ELEV 1581	5 METERS	SOUNDING I	5105
DATE 08/05/77 -	TIME 12:50 MST	ASCENT	RATE 500	FPM DATA INTER	AL 15 SEC.
INV HASE METERS AGI	INV TOP	(DEG	C1/100M	OFF COLLOW	William I will be a second of the second of
1012.	11647		0.59	=1.05	1
				**********	90 100 x 1000
UTAH UA	ALIFL	ELEV_158	S_METERS	SOUNDING II	5103
DATE 08/07/77	TIME OS: 20MST	ASCENT	RATE 500	FPM DATA INTERV	VAL 15 SEC.
INV BASE . METERS AGI	METERS AGI	IN	V DT/DZ C1/100M	DT/DZ BELOW INV	in a section of the s
0.	571.		SR.0	0.0	
*****	* * * * * * * * * * * * * * * *	*****	****	***	
				SOUNDING I	
DATE 08/07/77	TIME 13:50MST	ASCENT	RATE 500	FPM DATA INTER	/AL 15 SEC.
TNV RASE METERS AGI	TWA LUB	COFG	V 01/07 C1/100M	OFG COLLOW	



	**************************************	ELEV 1585 METERS	SOUNDING ID 5101
DATE 08/07/77	TIME 13:50MeT	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
TAV RASE METERS AGI	QUI VIII	THV DT/D7	OTINZ RELOW THE
1 1 2)	227	0 • U	⇒1°1∩
***************	* ± * * * * * * * ± ± * * * * * ± ± *	************** FLEV 1585 METERS	ARRANA AR
DATE 08/09/77	TIME OS: 21 MRT.	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
INV RASE METERS AGI	METERS ACT	TNV DT/DZ (DFG C)/100M	DIVIZ RELOW INV
		0.91	0.0
**************************************	. * * * * * * * * * * * * * * * * * *	**************************************	\$*************************************
DATE 08/09/77	TIME 13:50MST	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
INV HASE METERS AGI	METERS AGI	JAV DI/DZ (DEG C)/100M -	DT/DZ BELOW INV
1001.	1344	0.0	-1.03
**************************************	**********	**************************************	**************************************
DATE 08/11/77	TIME 05:22781	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
INV BASE METERS AGI	THY THE	INV DIJOZ CDEG CDZ100M	DTIDZ BELOW INV
0.	222?	1,19	Δ. Ω
***********	***********	**************************************	**************************************
DATE 08/11/77	TIME -13:50MQT	ASCENT RATE 500	FPM DATA INTERVAL 15 SEC.
INV HASE METERS AGE	THY TOP	INV DIZOZ	DT/DZ BELOW INV
		0,48	
***********	*************	**************************************	**************************************
			FPM DATA INTERVAL 15 SEC.
INV HASE METERS AGI	INV TOP	INV DI/DZ (DEG C)/100M	OT/DZ RELOW INV (DEG C)/100M
	419.	0.97	
**************************************	**************************************	**************************************	**************************************
			FPM DATA INTERVAL 15 SEC.
JNV RASE METERS AGI	15V TOP	14V DT/DZ (DEG C)/100M	OTIDZ BELOW INV
440.		0.0	
	10111	**************	**************************************
			POM DATA PAITEDWAL IR BEE



*********	*************	**************************************	**************************************	* * * * * * * * * * * * * * * * * * *
DATE 08/15/77	TIME OS: PANET	ARCENT RATE 500	FPM DATA INTERVA	L 15 SEC.
INV HASE METERS AGI	HETERS AGI	TOV DIJDZ CDEG CDZ100M	OTIOZ BELOW INV	
0.	305	1,18	0.0	
*******	*****	********	*****	A R R R R
		ELEV_1585 METERS		
			DT/DZ BELOW INV	*
	THV TOP METERS AGI	COFG CIZIOOM -	COEG C1/100M	
0.	305		0.0	Pen "
	******	**************************************	**************************************	5277
DATE- 08/19/77 -	TIME OS: 3PMET	ASCENT RATE 500	PPH DATA INTERVA	L 15 SEC.
INV BASE	INV TOP	INV DT/DZ	DT/DZ BELDW INV	The second of th
0.	3/13	0.53	0_0	to all that talk to the annual talk to the talk to the talk talk to the talk talk talk talk talk talk talk talk
		· · · · · · · · · · · · · · · · · · ·	e e e e e e e e e e e e e e e e e e e	dentiti (list literature - prendenses - methods
UTAH UZ	MA.	FLEV_1585_MFTERS	SOUNDING ID	5275
		ASCENT RATE SOO		L 15 SEC.
LAYF	R BASE LAY	FR TOP DT	/D7	ally the second of the
MFTF	O DET	INDI -2	1/100M	
P  a abi ci	100 2	250 - 0	89	er egen e
-	750	1000 = 0	23 · · · · · · · · · · · · · · · · · · ·	dissifier samilian marrillancella - votalla haita capaca.
				Seemined Look II (1972 v. 3) Choleman (1972 v. 4)
TAM UA	kararekeessasses NUR	FIFV 1585 METERS	******SOUNDING ID	5285
DATE 08/21/77	TIME 05:33MST.	ASCENI RATE 500	FPM DATA INTERVA	1 15 SEC.
INV RASE METERS AGE	TNV TOP	TNV OT/DZ (DEG C)/100M	OTZOZ BELOW INV	
Signature control of the control of	343	0.66	O O O O O O O O O O O O O O O O O O O	म ।। • ।। ।। ।। भा <sup>®</sup> वां भवित्रत
******		**************************************	**************************************	*******
		ASCENT RATE 500		
TAIU DADE	,	TAIN MT 4157	AT ANT DEL DIE THE	-
INV BASE METERS AGI		INV DIZUZ		12.10
	759.	0.0	-0.794	ik
***********	*************	**************************************	**************************************	******** 5278
DATE 08/23/77	TIME 05:35MRT	ASCENT RATE 500	FPM DATA INTERVA	L 15 3EC.
INV BASE METERS AGI			Mil.	as is any state or any any in any principle



********	***********	* * * * * * * * * * * * * * * * * * *	**************************************	**************************************	5278
DATE 08/23/77	TIME 05:35% 21	ASCENT_RAT	F 500 FPM	DATA INTERVAL	15_SEC.
INV_BASE	1:1V IMP	INV_DI	/n/ni/n	Z BELOW THY	
	MEIERS ACI				
n.	457	0.	77	0.0	
**********	**************************************	*********** FEEV 1585 MP	********** TERS	**************************	******** 5286
DATE 08/25/77	TIME 05: Samet	ASCENT RAT	F 500 FP4	DATA INTERVAL	15 SEC.
TAV BASE	THY THE METERS ACL	INV DI	100M DI/0	Z BFLOW INV EG C)/100M	
157	3/13 7	ο.	0	»=0°30	to the state of th
********	*****	***********	*******	**************************************	********* 5284
	TIME 13:42MgT				
INV RASE	144A10b	TSIN OT	40.7 D.T.(D	7 Orlow TNV	0330
METERS AGE	METERS ACL	(DEG C)/	100H (D	EG C)/100M	
1011.	1049	0.	n .	-0.80	ster to a
********	******	* * * * * * * * * * * * * * * * * * *	*******	*************	*******
	TIME 05:38/181				
THER	F ARE NO INVERS	TON BASES WIT	HTN 1500M	OF THE SEC	
		YER TOP TERS AGL	DT/DZ (DEG C)/100	M	
· · · · · · · · · · · · · · · · · · ·		100	-0.82	1986.	,
	250	2501 500	-0.79 -0.59		
	750	750 1000 1500	≈0.45 ≈0.45	,	
nandigeneration 1 and				and the second second	-
	***********	FLEV. 1585_ME		SOUNDING ID	
DATE 08/27/77	TIME 13:50MgT			DATA INTERVAL	15 SEC.
	YER BASE LA	TON BASES WIT	DT/DZ	OF THE SEC	с са природе с
	JERS AGL NF	IERS AGL	CDEG_C1/100	M	
e spinementalistic in .	100	250	-1 2/1 -0 50 -0 37 -0 33	en e a centre com una contrada e e a comuni. Esta accidente	e a are eq. ()
	250 504 750	500 750 1000	-0.37 -0.33		
excise*. Ass.	1000.	1500	-0.33 -0.51	e e e e e e e e e e e e e e e e e e e	Table 1
**************************************	****	* * * * * * * * * * * * * * * * * * *	*******	***********	*******
	TIME 05:40MST			DATA INTERVAL	15 SEC.
Bassier stire write				7 Ord Carlo Alla Carlos	remiting that
INV BASE METERS AGI	METERS AGI	(DEG C)/	100M (D	Z BELOW INV EG CIZIOOM	
()	381.74	1.	18	O O	an in Maria.
**************************************	******	***********	********* TERS	*************	5 2 8 0 * * * * * 5 2 8 0



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DATE 08/29/77	TIME 13:504'S	I ASCENI	RAIR 500	FPM	DATA INTERVAL 15 SEC	
THED	F ARE NO INVER	STON HASES	MITHIN	1500M	OF THE SEC	
		AYER IOR				
	TERS AGL 11	FIERS AGL	COEG	C)/10	OM	
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	250	500		0.56		
	750	1500		0 51		
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********	*********	****	*****	****	*****	* *
					SOUNDING ID 5273	
DATE 08/31/77	TIME OF APMO	T ASCENT	RATE SOO	FPM	DATA INTERVAL 15 SEC	•
			12 F 413 M	(3 T (1)	T Cheef Phil Thin	
METERS AGI	INV TOP	CDEG	C1/100M	01/	DEC COVION	1
	1147				0.0	
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	******	****	*****	****	******	*.*.
UTAHI	UAUB	FLEV_158	5 METERS		SOUNDING ID 5271	
DATE 08/31/77	11ME 12:50M9	T ASCENT	PATE 500	EDM	DATA INTERVAL 15 SEC	
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INV BASE	INV TOP	CNEC	V DIVDZ	DTA	DZ BELOW INV	
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(June 1984)

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